

IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

In re Patent Application of:
Stewart Townsend et al.

Application No.: 10/789,538

Confirmation No.: 9452

Filed: February 27, 2004

Art Unit: 1761

For: **NUTRITIONALLY COMPLETE PET FOOD
AND METHOD OF FEEDING AND
MANUFACTURING SAME**

Examiner: C. D. Sayala

DECLARATION UNDER 37 C.F.R 1.132

MS Amendment
Commissioner for Patents
P.O. Box 1450
Alexandria, VA 22313-1450

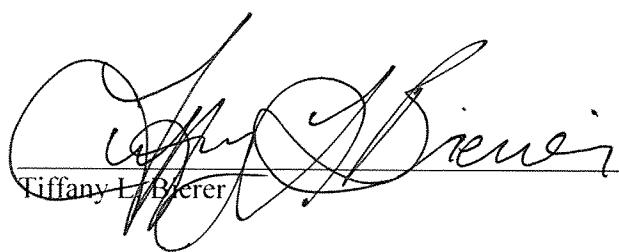
Dear Sir:

1. I, Tiffany L. Bierer, do hereby declare and state the following:
2. I am the Health Sciences and Nutrition Manager at Mars USA PetCare, Brentwood, Tennessee. I am responsible for the development and management of all dog and cat nutritional research programs for the U.S. and Canada and the management of palatability, digestibility and protocol testing programs for the U.S. and Canada. I also am responsible for the management of nutritional support of all cat and dog brands and the management of nutritional claim support for all dog and cat brands. I received a Bachelor's of Science in Animal Sciences and a Doctor of Philosophy in Nutritional Biochemistry. I have been working in the area of pet nutrition since 1995 and have worked in the past with, and currently work with, scientists having various levels of expertise, skill, and experience in pet nutrition. Based on this expertise and work experience in this area, I can provide opinions as to how one with ordinary skill would understand the nutritional requirements of pets, the equivalents of various types of pet food and as to the general knowledge that one with ordinary skill would have in this area. (See attached resume.)
3. I have read the above referenced patent application, as well as the Examiner's Action.

4. I have been asked to discuss the comparison of one execution of the inventive pet food with known pet food products, specifically dry kibble and canned wet pet food.
5. The dry kibble and canned wet pet food in the comparison below is commercially available dry kibble (measured using an 8oz measuring cup) and canned wet pet food (using 13.2 oz cans) that is complete and balanced for dogs under the guidelines of the Association of American Feed Controls Officials (AAFCO) for nutritional adequacy.
6. I assert that an extra small piece of the inventive pet food is nutritionally equivalent to approximately $\frac{1}{2}$ cup of dry kibble or approximately $\frac{1}{3}$ can of wet pet food.
7. I assert that a small piece of the inventive pet food is nutritionally equivalent to approximately $\frac{3}{4}$ cup of dry kibble or approximately $\frac{1}{2}$ can of wet pet food.
8. I assert that a medium piece of the inventive pet food is nutritionally equivalent to approximately 1 and $\frac{1}{2}$ cups of dry kibble or approximately 1 can of wet pet food.
9. I assert that a large piece of the inventive pet food is nutritionally equivalent to approximately 2 cups of dry kibble or approximately 1 and $\frac{1}{3}$ cans of wet pet food.
10. I hereby declare that all statements made are herein true and that these statements were made with the knowledge that willful false statements and the like so made are punishable by fine or imprisonment, or both, under § 1001 of Title 18 of the United States Code and that such willful false statements may jeopardize the validity of the application or any patent issued thereon.

Dated:

5/23/07



Tiffany L. Bierer

DR. TIFFANY L. BIERER

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Brentwood, TN 37027
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EDUCATION

| | | | |
|--|--|---|----------|
| Ph.D. | Nutritional Biochemistry Department of Food Science | University of Illinois at Urbana-Champaign | May 1995 |
| Thesis: Comparative Absorption and Lipoprotein Transport of Various Carotenoids in the Preruminant Calf. | | | |
| B.S. | Animal Sciences | University of Illinois at Urbana-Champaign | May 1989 |

EMPLOYMENT

| | |
|---|--------------|
| Health Sciences and Nutrition Manager, Mars USA PetCare | 2003-present |
| <ul style="list-style-type: none">-Development and management of all dog and cat nutritional research programs for the US and Canada-Management of palatability, digestibility and protocol testing programs for the US and Canada-Management of nutritional support of all cats and dog brands-Management of nutritional claim support for all dog and cat brands-Animal welfare-Consumer insight methodologies-Intellectual property support-Public relations for scientific communications-Active member of Pet Food Institute Nutrition Task Forces | |
| Health Innovation Manager, Masterfoods USA, Vernon, CA | 1997-2003 |
| <ul style="list-style-type: none">-Development and management of dog and cat nutritional research programs-Management of nutritional support of cats and dog brands-Management of nutritional claim support for dog and cat products-Consumer Insight Methodologies-Intellectual property support-Regulatory approval of advertising claims for all cat and dog brands-Active member of Pet Food Institute Nutrition Task Forces | |
| Nutrition Development Supervisor, Kal Kan Foods, Inc., Vernon, CA. | 1995-1997 |
| <ul style="list-style-type: none">-Development and management of pet oral care program in North America | |

- Research for new oral health care products and claims
- Skin and coat care in dogs and cats
- Development of new research platforms

Research Fellow/Assistant, University of IL at Urbana-Champaign 1991-1995

- Development of animal models for carotenoid metabolism
- Lipoprotein transport of carotenoids
- Enzymatic conversion of β -carotene to vitamin A
- Isolation and bioavailability of cis-isomers of carotenoids
- Lymphatic and portal transport of lipids and carotenoids

Visiting Research Specialist in Life Sciences, University of IL at Urbana-Champaign 1989-1991

- Bioavailability of carotenoids from foods
- Development of animal models for human carotenoid metabolism
- Absorption of carotenoids

Laboratory Assistant, University of IL at Urbana-Champaign 1988-1989

- Fiber analysis of feeds (NDF, ADF, Lignins)
- Kjeldahl protein analysis of feeds and biological samples

Publications

PUBLICATIONS

USE OF GASTROINTESTINAL LUBRICANT AND DIETARY FIBRES IN A CAT TREAT DESIGNED TO ENHANCE FECAL ELIMINATION OF INGESTED HAIR. K Zubair, A Torney, J Atkinson, L Scott, L Mooney, F Shieds and TL Bierer, J Nutr (in press)

HIGH PROTEIN, LOW CARBOHYDRATE DIETS ENHANCE WEIGHT LOSS IN DOGS. TL Bierer and LM Bui, J Nutr 134: 2087S-2089S, 2004

EFFECT OF A "CHEWY TREAT" ON DENTAL DEPOSITS AND GINGIVITIS IN CATS. KE Ingham, C Gorrel and TL Bierer, J Vet Dent 2003.

THE IMPROVEMENT OF ARTHRITIC SIGNS IN DOGS FED GREEN-LIPPED MUSSEL (PERNA CANALICULUS). TL Bierer and LM Bui, J Nutr 132(6): 1634S-1636S, 2002.

THE INFLUENCE OF GREEN LIPPED MUSSELS (PERNA CANALICULUS) IN ALLEVIATING SIGNS OF ARTHRITIS IN DOGS. LM Bui and TL Bierer, Vet Therapeutics 2:101-111, 2001.

LONG TERM EFFECTS OF A DENTAL HYGIENE CHEW ON THE PERIODONTAL HEALTH OF DOGS. C Gorrel and TL Bierer, J Vet Dent 16(3): 109-113, 1999.

EFFECT OF A NEW DENTAL HYGIENE CHEW ON PERIODONTAL HEALTH IN DOGS. C Gorrel, J Warrick and TL Bierer, J Vet Dent 16(2):77-81, 1999.

ORAL HEALTH: ELEMENTS OF A GOOD PET DENTAL CARE PROGRAM. TL Bierer, Petfood Industry. 40(4):26-30, 1998.

COMPARATIVE ABSORPTION AND TRANSPORT OF FIVE COMMON CAROTENOIDS IN PRERUMINANT CALVES. TL Bierer, NR Merchen and JW Erdman, Jr, J Nutr 125:1569-1577, 1995.

INTERACTIONS OF ORAL β -CAROTENE AND CANTHAXANTHIN IN FERRETS. WS White, KM Peck, TL Bierer, ET Gugger and JW Erdman, Jr, J Nutr 123:1405-1413, 1993.

THE ACCUMULATION OF α - AND β -CAROTENE IN SERUM AND TISSUES OF PRERUMINANT CALVES FED RAW AND STEAMED CARROT SLURRIES. CL Poor, TL Bierer, NR Merchen, GC Fahey, Jr. and JW Erdman, Jr, J Nutr 123:1296-1304, 1993.

TRANSPORT OF NEWLY-ABSORBED BETA-CAROTENE BY THE PRERUMINANT CALF. TL Bierer, NR Merchen, DR Nelson and JW Erdman, Jr. In: Carotenoids in Human Health. (eds) LM Canfield, NI Krinsky and JA Olson. Annals of the New York Academy of Sciences, 691:226-228 New York, NY, 1993.

BETA-CAROTENE UPTAKE AND TISSUE DISTRIBUTION IN THE FERRET (MUSTELA PUTORIUS FURO). ET Gugger, TL Bierer, TM Henze, WS White and JW Erdman, Jr, J Nutr 121:115-119, 1992.

EVALUATION OF THE PRERUMINANT CALF AS A MODEL FOR THE STUDY OF HUMAN CAROTENOID METABOLISM. CL Poor, TL Bierer, ET Gugger, NR Merchen, GC Fahey, Jr. and JW Erdman, Jr, J Nutr 122:262-268, 1992.

REVIEW CHAPTERS

THE ROLE OF NUTRITION AND COMMON ORAL DISEASES. C Gorrel and TL Bierer, In: Nutrition and Immunology: Principles and Practice (eds) M.E. Gershwin, J.B. German and C.L. Keen pp423-437, 2000.

ABSORPTION AND TRANSPORT OF CAROTENOIDS. JW Erdman, Jr., TL Bierer and ET Gugger. In: *Carotenoids in Human Health*. (eds) L.M. Canfield, N.I. Krinsky and J.A. Olson. Annals of the New York Academy of Sciences, Vol. 691 New York, NY, 1993.

ABSTRACTS

AB LIB FEEDING OF A HIGH PROTEIN, LOW CARBOHYDRATE DIET MAINTAINS BODY WEIGHT IN IDEAL WEIGHT DOGS. TL Bierer. Faseb Journal 2004.

HIGH PROTEIN, LOW CARBOHYDRATE DIETS AND NOT CONJUGATED LINOLEIC ACID PROMOTE WEIGHT LOSS IN OVERWEIGHT DOGS. TL Bierer & LM Bui. Faseb Journal 2004.

THE EFFECT OF HIGH PROTEIN DIETS AND CONJUGATED LINOLEIC ACID ON WEIGHT LOSS IN DOGS. TL Bierer & LM Bui. WALTHAM International Science Symposium. Bangkok, Thailand, 2003.

A SEMI-MOIST TREAT CONTAINING GREEN-LIPPED MUSSEL (*Perna canaliculus*) CAN HELP TO ALLEVIATE ARTHRITIC SIGNS IN DOGS. LM Bui, K Pawlowski & TL. FASEB Journal 14(4):A748, 2000.

REDUCTION OF ARTHRITIC SIGNS IN DOGS FED A MAINMEAL DRY DIET CONTAINING GREEN LIPPED MUSSEL (*Perna canaliculus*). LM Bui, K Pawlowski & TL Bierer. FASEB Journal 14(4):A748, 2000.

CHANGES IN BLOOD MINERALS, ANTIOXIDANTS AND FATTY ACIDS IN DOGS FED GREEN-LIPPED MUSSEL. LM Bui and TL Bierer. FASEB Journal 14(4):A749, 2000.

THE INFLUENCE OF GREEN-LIPPED MUSSEL (*Perna Canaliculus*) POWDER ON ALLEVIATING ARTHRITIC SIGNS IN DOGS. LM Bui, K Pawlowski, and TL Bierer, FASEB Journal 14(4):A218, 2000.

ANTIOXIDANT NUTRIENTS IN PET FOODS. TL Bierer and LB Bui. Annual Meeting of The American Oil Chemist's Society 1999.

THE INFLUENCE OF GREEN-LIPPED MUSSEL (PERNA CANALICULUS) ON ALLEVIATING ARTHRITIC SIGNS IN DOGS. LM Bui, K Pawlowski, JM Hodge and TL Bierer. Proceedings-Nutrition Society of Australia 23:163, 1999.

BENEFITS OF A NEW DENTAL HYGIENE CHEW FOR DOGS. TL Bierer, 7th European Congress of Veterinary Dentistry p95, 1998.

BENEFITS OF A NEW DENTAL HYGIENE CHEW ON THE PERIODONTAL HEALTH OF DOGS. TL Bierer, British Veterinary Dental Association p54, 1998

LONG TERM BENEFITS OF A DENTAL HYGIENE CHEW ON THE PERIODONTAL HEALTH OF DOGS. C Gorrel and TL Bierer, World Veterinary Dental Congress p38-39, 1997.

ABSORPTION AND TISSUE DISTRIBUTION OF ALL-TRANS AND 9-CIS BETA-CAROTENE IN THE PRERUMINANT CALF. TL Bierer, NR Merchen and JW Erdman, Jr. FASEB Journal 10(3):A239, 1996.

LACK OF SERUM UPTAKE OF 9-CIS β -CAROTENE FROM ALGAL SOURCES AND A 9-CIS β -CAROTENE ENRICHED EXTRACT BY THE PRERUMINANT CALF. TL Bierer, NR Merchen and JW Erdman, Jr. FASEB Journal 9(3):A442, 1995.

EFFECT OF DIETARY FAT LEVEL IN CONSECUTIVE MEALS ON THE ABSORPTION OF β -CAROTENE IN THE PRERUMINANT CALF. TL Bierer, NR Merchen and JW Erdman, Jr. FASEB Journal 9(3):A172, 1995.

COMPARATIVE ABSORPTION AND LIPOPROTEIN TRANSPORT OF FIVE COMMON CAROTENOIDS IN THE PRERUMINANT CALF. TL Bierer, NR Merchen and JW Erdman, Jr. FASEB Journal 8(4-5):A422, 1994.

ABSORPTION AND TRANSPORT OF VARIOUS CAROTENOIDS IN THE PRERUMINANT CALF. TL Bierer, NR Merchen and JW Erdman, Jr. Conference, Antioxidant Vitamins and β -Carotene in Disease Prevention, Berlin, Germany, 1994.

LIPOPROTEIN TRANSPORT OF CAROTENOIDS IN THE PRERUMINANT CALF. TL Bierer, NR Merchen, DR Nelson and JW Erdman, Jr. FASEB Journal 7(3-4):A521, 1993.

CAROTENOID TRANSPORT BY THE PRERUMINANT CALF. TL Bierer, NR Merchen, DR Nelson and JW Erdman, Jr. University of Illinois, Functional Foods For Health, Second Annual Retreat, 1993.

β -CAROTENE UPTAKE AND TISSUE DISTRIBUTION IN THE FERRET. ET Gugger, TL Bierer and JW Erdman, Jr. University of Illinois, Functional Foods For Health, Second Annual Retreat, 1993.

INTERACTIVE EFFECTS OF ORAL CAROTENOIDS IN FERRETS. WS White, TL Bierer, ET Gugger and JW Erdman, Jr. FASEB Journal 6(5):A1657, 1992.

BIOAVAILABILITY OF BETA-CAROTENE FROM RAW AND COOKED CARROTS BY THE PRERUMINANT CALF. CL Poor, TL Bierer, NR Merchen, GC Fahey, Jr. and JW Erdman, Jr. FASEB Journal 6(5):A1657, 1992.

BETA-CAROTENE CONCENTRATIONS IN TISSUES OF PRERUMINANT CALVES FOLLOWING A SINGLE ORAL DOSE OF BETA-CAROTENE. CL Poor, TL Bierer, NR Merchen, GC Fahey, Jr. and JW Erdman, Jr. FASEB Journal 5(5):A1322, 1991.

BETA-CAROTENE UPTAKE AND TISSUE DISTRIBUTION IN THE FERRET (*MUSTELA PUTORIUS FURO*). ET Gugger, TL Bierer, TM Henze, WS White and JW Erdman, Jr. FASEB Journal, 1991.

THE PRERUMINANT CALF AND THE FERRET AS MODELS FOR THE STUDY OF HUMAN CAROTENOID METABOLISM. CL Poor, TL Bierer, ET Gugger, NR Merchen, GC Fahey, Jr. and JW Erdman, Jr. FASEB Journal 4(4):A1055, 1990.

ABSORPTION AND TISSUE ACCUMULATION OF BETA-CAROTENE IN THE PRERUMINANT CALF AND THE FERRET. CL Poor, TL Bierer, ET Gugger, NR Merchen, GC Fahey, Jr. and JW Erdman Jr. FASEB Summer Retinoids Conference, 1990.